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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/558,705	11/29/2005	Takatoshi Furukawa	281578US2PCT	6966

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EXAMINER	
GREENE, JASON M	
ART UNIT	**PAPER NUMBER**
1797	

NOTIFICATION DATE	DELIVERY MODE
06/11/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/558,705	FURUKAWA ET AL.	
	Examiner	Art Unit	
	Jason M. Greene	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *3* is/are allowed.

6)☒ Claim(s) *1 and 2* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 November 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/29/05; 2/23/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because under 37 CFR 1.84(p)(1) since the view numbers (i.e. Fig. 1, Fig. 5 and Fig. 9) are not oriented in the same direction as the view. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because it is not limited to one (1) paragraph in length. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Best et al. (US 6,517,786 B1).

Best et al. discloses an exhaust emission control device comprising a plurality of capturing cells (see col. 5, lines 63-67) each including a cylindrical outer electrode (6) constituted by an electrically conductive filter capable of capturing particulates, a rod-like inner electrode (3) inserted into the outer electrode and a dielectric (4) for lining an outer surface of the inner electrode, a cylindrical housing (8) within which the capturing cells are arranged in parallel with each other, exhaust divergence means on one end of the housing and in communication with the interiors (5) of the outer electrode (see col.

5, lines 22-30) in the respective capturing cells, and exhaust convergence means on the other end of the housing and in communication with a gap (7) between an inner surface of the housing and outer surfaces of the respective capturing cells, voltage (from 9) necessary for generation of electric discharge being applicable across the inner and outer electrodes in Fig. 2 and col. 5, line 1 to col. 6, line 23.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Best et al. (US 6,517,786 B1).

With regard to claim 1, Best et al. discloses another embodiment of an exhaust emission control device comprising a plurality of capturing cells including an outer electrode (6) constituted by an electrically conductive filter capable of capturing particulates, a rod-like inner electrode (3) inserted into the outer electrode and a dielectric (4) for lining an outer surface of the inner electrode, a cylindrical housing

within which the capturing cells are arranged in parallel with each other, exhaust divergence means on one end of the housing and in communication with the interiors (5-5d) of the outer electrode in the respective capturing cells, and exhaust convergence means on the other end of the housing and in communication with a gap between an inner surface of the housing and outer surfaces of the respective capturing cells, voltage (from 9) necessary for generation of electric discharge being applicable across the inner and outer electrodes in Fig. 3 and col. 6, line 24 to col. 7, line 8.

Best et al. does not disclose the embodiment of Fig. 3 wherein the outer electrodes are cylindrical, but Best et al. teaches cylindrical outer electrodes in the embodiment of Fig. 2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the cylindrical shape of the outer electrodes of the Fig. 2 embodiment into the Fig. 3 embodiment in that such are disclosed as being alternate shapes for the outer electrodes of Best et al. Additionally, one of ordinary skill in the art at the time the invention was made would have recognized that the shape could be changed in that such is merely a choice of design. See In re Dailey et al., 149 USPQ 47.

With regard to claim 2, Best et al. discloses an exhaust emission control device comprising a plurality of capturing cells (see col. 9, lines 8-10) each including an inner electrode (6) constituted by an electrically conductive filter capable of capturing particulates, a cylindrical outer electrode (3) surrounding the inner electrode and a

dielectric (4) for lining an inner surface of the outer electrode, a cylindrical housing within which the capturing cells are arranged in parallel with each other, exhaust divergence means on one of the housing and in communication with a gap (5) between an inner surface of the dielectric and an outer surface of the inner electrode in each of the capturing cells, exhaust convergence means on the other end of the housing and in communication with an interior (7) of the inner electrode in each of the capturing cells, voltage (from 9) necessary for generation of electric discharge being applicable across the inner and outer electrodes in Fig. 6 and col. 8, line 25 to col. 9, line 10.

Best et al. does not explicitly teach the embodiment of Fig. 6 having a cylindrically shaped inner electrode, but Best et al. teaches cylindrical inner electrodes in the embodiment of Fig. 2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the cylindrical shape of the outer electrodes of the Fig. 2 embodiment into the Fig. 6 embodiment in that such are disclosed as being alternate shapes for the inner electrodes of Best et al. Additionally, one of ordinary skill in the art at the time the invention was made would have recognized that the shape could be changed in that such is merely a choice of design. See In re Dailey et al., 149 USPQ 47.

Allowable Subject Matter

7. Claim 3 is allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

Best et al. discloses an exhaust emission control device comprising a plurality of capturing cells (see col. 9, lines 8-10) each including an inner electrode (6) constituted by an electrically conductive filter capable of capturing particulates, a cylindrical dielectric material (4) surrounding the inner electrode and a cylindrical outer electrode (3) surrounding the dielectric, a cylindrical housing within which the capturing cells are arranged in parallel with each other, exhaust divergence means on one of the housing and in communication with a gap (5) between an inner surface of the dielectric and an outer surface of the inner electrode in each of the capturing cells, exhaust convergence means on the other end of the housing and in communication with an interior (7) of the inner electrode in each of the capturing cells, voltage (from 9) necessary for generation of electric discharge being applicable across the inner and outer electrodes in Fig. 6 and col. 8, line 25 to col. 9, line 10.

Best et al. does not explicitly teach the embodiment of Fig. 6 having a cylindrically shaped inner electrode, but Best et al. teaches cylindrical inner electrodes in the embodiment of Fig. 2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the cylindrical shape of the outer electrodes of the Fig. 2 embodiment into the Fig. 6 embodiment in that such are disclosed as being alternate shapes for the inner electrodes of Best et al. Additionally, one of ordinary skill

in the art at the time the invention was made would have recognized that the shape could be changed in that such is merely a choice of design. See In re Dailey et al., 149 USPQ 47.

The prior art made of record does not teach or fairly suggest the exhaust emission control device of claim 3 wherein the cylindrical outer electrode comprises an electrically conductive filter capable of capturing particulates, or wherein the exhaust divergence means is in communication with a gap between an inner surface of the outer electrode and an outer surface of the dielectric in each of the capturing cells.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Takenaka et al., Shimoda et al., Igarashi, Furukawa et al., Josephson et al., Okubo et al. and Cotton references disclose similar devices.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571) 272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason M. Greene
Primary Examiner
Art Unit 1797

/Jason M. Greene/
6/6/08

jmg
June 6, 2008